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ABSTRACT

A study investigated the effect of explicit instruction in notetaking on sixth-grade students' notetaking skills and comprehension of lecture information, as well as on students' attitudes towards notetaking. Subjects, 41 students enrolled in two academically gifted and 47 students in two average ability language arts classes from a middle school in the southeast, were randomly assigned to explicit instruction or blind instruction (the control group) treatments involving the usefulness and procedures of split-page notetaking. All instruction was delivered daily in 50-minute sessions during a 2-week period. Pre- and posttreatment measures involved students writing a one-paragraph summary of a lecture they just heard and completing a cloze test based on the lecture. The Stanford Listening Comprehension subtest and a Notetaking Attitude Survey were also administered. Results indicated that: (1) students in the explicit instruction group scored higher on the cloze test and viewed notetaking more positively than subjects in the control group; and (2) there were no significant differences between explicit instruction subjects and control subjects on the listening test or the summarization measure. Findings suggest that explicit instruction in a specific notetaking strategy is beneficial to students as young as the sixth grade. (One table and two figures of data are included; the Notetaking Attitude Survey and 14 references are attached.) (RS)

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Effects of Explicit Instruction in Notetaking on Sixth Graders' Lecture Comprehension and Attitudes Toward Notetaking

Despite recent emphasis on experiential learning, the lecture format still prevails at the middle school level (Goodlad, 1984; Wood & Muth, 1991). During lectures middle grade students are expected to take notes to use later in test preparation; although , typically teachers do not provide instruction in *how* to take notes. Proficiency in notetaking will serve students not only in middle school content classrooms, but also in secondary and postsecondary settings (Anderson & Armbruster, 1984).

In order to take notes efficiently and effectively, students need instruction in notetaking skills (Readence, Bean, & Baldwin, 1985; Schilling, 1984). Davey and Bensky (1989) describe how explicit instruction might be used to teach notetaking to middle school students, but do not provide a research base for the approach. Explicit instruction notetaking has been used successfully with college students (Spires & Stone, 1989; Spires, in press). Spires and Stone (1989) designed a directed notetaking activity based on Pearson and Gallagher's (1983) model of explicit instruction which includes the following stages: 1) rationale and explanation of the strategy; 2) teacher modeling of the strategy; 3) teacher and student working collaboratively to use the strategy; 4) teacher and peer feedback on use of the strategy; and 5) independent student use of the strategy (see Figure 1).

Embedded within explicit instruction is the developmental theory of Vygotsky (1978) which emphasizes the social nature of cognition and learning. Vygotsky asserts that cognition is best expanded through social interactions or "shared meaning" between instructor and learner. Over time the cognitive processes of the instructor are internalized by the learner and reappear in the learner's thinking. The difference between the learner's initial level of functioning and potential level of development given peer and instructor support is known as the "zone of proximal development." Bruner (1978) refers to this support from the instructor as "scaffolding." When the "scaffold" is removed, the learner is able to function independently at a higher cognitive level. The gradual shift of responsibility from teacher to student occurs between steps 2 and 5 in the explicit instructional model.

This study was designed to investigate the effect of explicit instruction in notetaking on sixth grade students' notetaking skills and comprehension of lecture information. A second purpose of the study was to examine the effect of explicit instruction in notetaking on students' attitudes toward notetaking and perceptions of their ability to take notes.

Method

Subjects

The subjects were 88 sixth grade students (42 males and 46 females) from a suburban middle school in the southeast. Forty-one of the students were enrolled in academically gifted (AG) language arts classes while the remaining forty-seven students were in average ability (AVE) language arts classes. Students who were absent during either pre or posttesting sessions were excluded from the final analysis. This left a total of 79

subject for data analysis.

Students in the AG classes were either participating in the school's academically gifted program or eligible to do so. A t-test across mean scores of the California Achievement Test (CAT) Comprehension Reading subtest revealed no significant difference between the AG classes ($t = .713$, $p = .481$). Enrollment in the two AG classes was 19 and 22. The two AVE class enrollments were 24 and 23. A t-test across mean scores of the CAT Comprehension Reading subtest also showed no significant difference ($t = .246$, $p = .807$) between the two AVE classes. However, as was expected , t-test results did indicate a significant difference between the mean CAT score of the AVE classes and that of the AG classes ($t = 8.027$, $p = .000$).

Procedures

One AG class and one AVE class were randomly assigned to one of the following treatments: explicit instruction or blind instruction (i.e., control). All subjects received instruction from their regular classroom teacher who had detailed lesson plans and training from the researchers. All instruction was delivered in daily fifty minute sessions during a two-week period. Lecture content during instruction was drawn from "The Novel," a regular sixth grade unit, and was identical for both groups.

Explicit Instruction Treatment. At the outset of instruction the teacher provided a rationale for and explanation of split-page notetaking. This method of notetaking involves dividing the page into two columns and writing main ideas on the right hand side of the page and supporting details on the left. Following an overview of the explicit instructional model, the teacher demonstrated split-page notetaking and verbalized her rationale in recording and selecting ideas. After working collaboratively with the teacher to construct split-page notes, the students practiced individually and compared notes with the teacher and peers. Guided feedback gradually decreased so that during the last two sessions students took notes independently.

Control Treatment. The control groups also received information about the procedures and usefulness of split-page notetaking. Students were then shown an example of split-page notes and instructed to begin taking notes in this format. During the second and third sessions, split-page guidelines were reviewed and again students were expected to utilize the procedure. In the remaining sessions, students received only a brief prompt to follow split-page guidelines.

Pre and Posttreatment Measures. In order to assess student's notetaking ability and lecture comprehension before and after treatment, two ten-minute scripted lectures were delivered by the regular teacher in a counterbalanced design. Each lecture focused on the life of a writer of a novel the students would be reading later in the semester. Lecture content was adapted from literary biographical references.

During the lectures students took notes. After the lecture, without referring to their notes, they wrote a one-paragraph summary of the lecture and completed a cloze test based on the lecture. Each cloze test consisted of five paragraphs from which a total of twenty-five content terms had been deleted. Both cloze tests were approximately 230 words in length and reading level was appropriate for sixth grade. The cloze tests were scored by one of the researchers using a key. Semantically and syntactically correct responses as well as spelling approximations were accepted. Generic and vague responses were considered incorrect.

Students lecture notes were judged by two raters with respect to format and quality of content, with the latter weighted double (see Figure 2). Interrater reliability for the two raters was established at .91. Rating criteria for the summaries were accuracy and inclusion of key points. Summary ratings ranged from zero to

three points. Interrater reliability was established at .92.

In addition to the measures described above, two other posttreatment assessments were employed. These included the Stanford Achievement Listening Comprehension subtest and a ten-item Notetaking Attitude Survey developed by the researchers (see Figure 3).

Results

Initially, a two-way MAN OVA (Ability X Treatment) revealed no significant interactions, $F(3,70) = 1.71$, $p = .0327$. Therefore, the ability groups were collapsed and a one-way MANCOVA was run across treatments. Results indicated a statistically significant effect for treatment, $F(3, 73) = 8.356$, $p = .000$. Univariate follow-up tests revealed a significant effect on the cloze test for the explicit instruction group, $F(1,74) = 22.167$, $p = .000$; however, there were no significant differences on the notetaking task, $F(1,74) = .052$, $p = .821$ or on the summary rating, $F(1,74) = 2.696$, $p = .105$.

Results from a t-test revealed no significant differences on listening comprehension between groups, $t = .864$, $p = .390$. Results from a second t-test revealed a significant difference on attitudes toward notetaking in favor of the group that received explicit instruction, $t = 4.472$, $p = .047$. (See Table 1 for means and standard deviations.)

Discussion

This study provides further evidence supporting the use of an explicit instructional model in notetaking. Students who received this type of instruction scored higher on a cloze test that assessed immediate comprehension of lecture material. Apparently, learning *how* differentiate main points from details and using a systematic notetaking procedure induces active involvement with the information, which ultimately contributes to greater comprehension.

Becoming familiar with a notetaking system through explicit instruction also seems to enable students to view notetaking more positively. This outcome of explicit instruction might be attributed to the fact that the students feel more in control of the lecture situation.

The fact that there were no significant results with the summarization measure may be due to the students' lack of experience with writing summaries. Likewise, the lack of results on the listening comprehension measure may be due in part to the global nature of the listening test as well as the fact that the test was decontextualized from the regular classroom lesson content.

Although the present study suggests that explicit instruction in a specific notetaking strategy is beneficial to students as young as sixth grade, further research is needed to compare the efficacy of notetaking with that of outlining, mapping, and other methods of recording essential information during a lecture. Explicit instruction in other reading and learning strategies should also be explored at the middle school level.

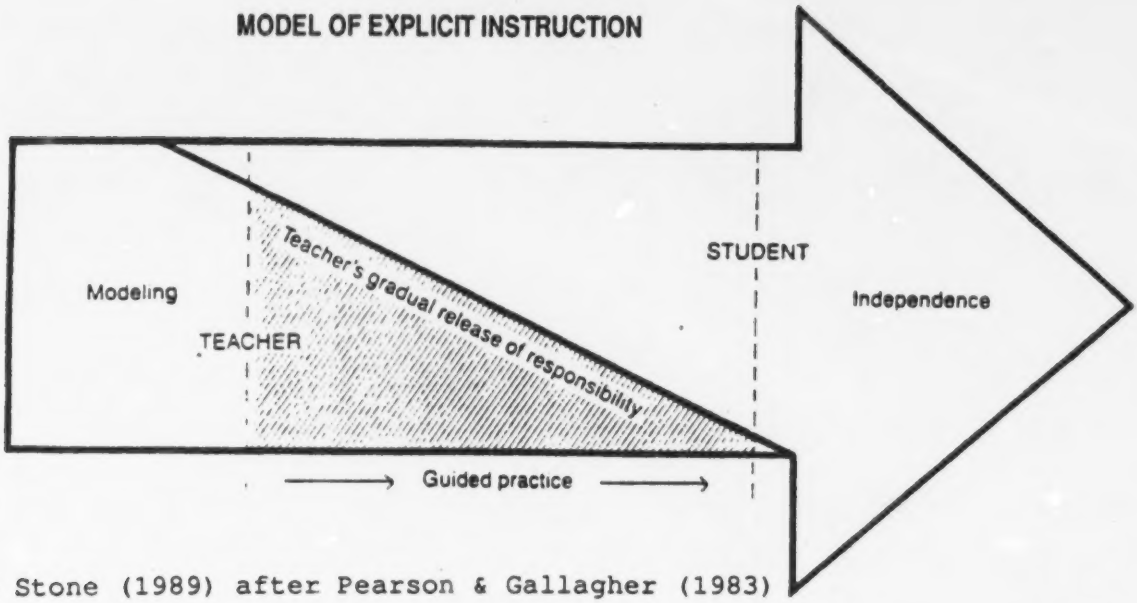
Table 1

Means and Standard Deviations by Treatment

	Explicit Instruction (n = 42)	Control (n =43)
Notetaking	38.476 (7.141)	39.186 (4.722)
Cloze Test	*19.095 (3.184)	16.070 (3.494)
Summary	2.190 (0.740)	2.163 (0.615)
Listening Comprehension	29.214 (5.131)	28.178 (6.047)
Attitude	*2.990 (0.644)	2.345 (0.621)

* $p < .05$

Figure 1



Spires & Stone (1989) after Pearson & Gallagher (1983)

Figure 2

Notetaking Assessment Instrument

Format	Low		Middle		High
Split-page format	1	2	3	4	5
Legibility	1	2	3	4	5
Abbreviate Common Words/ Recurring Items	1	2	3	4	5
			Subtotal_____		
Content					
Accurate Conception of Main Points	2	4	6	8	10
Accurate Details, Secondary Points	2	4	6	8	10
Appropriate Sequence	2	4	6	8	10
Clarity of Wording	2	4	6	8	10
			Subtotal_____		
			Total_____		

Spires & Stone (1989)

Figure 3

Period:_____

Notetaking Attitude Survey

Directions: Circle the response that best matches how you feel about the statement.

SA = Strongly Agree
A = Agree
D = Disagree
SD = Strongly Disagree

1. I like to take notes when I listen to a lecture.	SA	A	D	SD
2. I am able to take good notes when I listen to a lecture.	SA	A	D	SD
3. Taking notes helps me pay attention when my teacher lectures.	SA	A	D	SD
4. My notes include most of the important information from the lecture.	SA	A	D	SD
5. I do better on tests if I take good notes.	SA	A	D	SD
6. My notes are clear and easy to read.	SA	A	D	SD
7. When I read my notes, I can remember what my teacher said.	SA	A	D	SD
8. The split page method helps me take better notes.	SA	A	D	SD
9. I like to take notes in the split-page form.	SA	A	D	SD
10. I am going to take split-page notes in my other classes whenever I can.	SA	A	D	SD

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